activating said engine so that the engine operates for a predetermined time interval, the controlled release of the combustion gases therefrom producing [to produce a pulse] pulses of acoustic [pressure] energy which is propagated within the aquatic environment.

A1 Cont.

Claim 2 (amended). A method as in Claim 1, wherein:

said engine operates on [the] a regenerative piston principle such as the HIPPE.

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A2

Claim 5 (amended). A method as in Claim 1, wherein:

said pulse of energy is [roughly about] approximately between 3 [to] and 10 milliseconds in duration.

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A3

Claim 7 (amended). A method as in Claim 1, wherein:

the pressure produced by the pulse is [roughly about] approximately between 3000 [to] and 10,000 psi.

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A4

Claim 10 (amended). An acoustic generator for an aquatic environment comprising:

a repeatable pulse combustion engine being operable in a low frequency range below 800 Hz including a combustion chamber having an exit,

a pipe having a first end affixed to said combustion chamber exit and in fluid communication with said exit, said pipe having an axially extending second end; and

disperser means having an outer surface, said disperser means centrally located on the axis of the second end of said pipe, and adjacent the second end for dispersing combustion gases discharged therefrom, wherein,

when said engine is pulsing, the combustion gases from said combustion chamber travel through said pipe and through a space between the outer surface of said disperser means and said second end of the pipe, so that the combustion gases are spread out as they flow around said disperser means forming a controlled cavity in the surrounding aquatic environment and a resultant acoustic wave through said environment.

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